D&D Subgroup Highlights
October 13, 1998

This meeting was held in the ETB Spokane River Room starting at 9:00am.

ATG Presentation

Kevin Salmon, director of Projects and Sales, from ATG Inc. gave a viewgraph presentation on work being done by Allied Technology Group (ATG). ATG has a small facility here in Richland employing 115 people on a 45 acre site. ATG originally was a British firm and was renamed ATG after an employee buyout in 1984. It is headquartered in Fremont, CA and the Richland operation began in 1989 performing waste supercompaction. In 1997, the Richland site began vitrifying LLW and a Mixed Waste Processing facility is to open in January 1999. ATG is still pursuing permits for the MW facility from EPA and Washington State Ecology. Kevin showed organization charts for both the national operation and Richland site. ATG went public with an offering in April of this year.

Due to the increasing costs for radioactive waste disposal ATG employs a triage approach to lower overall disposal costs. The idea is to use a number of techniques such as thermal destruction, compaction, decontamination, etc. to reduce the rad waste disposal costs. All incoming material to ATG is sorted by activity and type. The metals and debris are volume reduced and decontaminated for free release. The low activity waste is supercompacted and sent to licensed disposal. Liquids and sludges, resins, biological materials, and higher activity material is sent to the SAFGLAS process. Super compaction has a 6:1 to 10:1 volume reduction while the SAFGLAS process has a 200 to 1 volume reduction as well as a 10:1 to 50:1 mass reduction. ATG's SAFGLAS process involves the use of three major pieces of equipment: a bulk processing unit, a glass melter, and a gas vitrification unit. The bulk processing unit just started up last month and is a drum oven that handles biological waste, metals, and heterogeneous waste in drums. The glass melter receives waste from the bulk processing unit as well as other waste such as slurries or sludges, shredded waste, and oils. The glass melter will run three years without shutting down but no metals can be fed into it or the unit would be poisoned. The gas vitrification unit is a plasma arc furnace operating at 10000°F and can process up to 150 pounds per hour of waste including resins, halogens, metals, etc. The SAFGLAS process minimizes the amount of secondary waste and results in drums of glass and off gases that are scrubbed a number of times.

The Richland ATG facility is scheduled to start macroencapsulating waste in January/February 1999. The thermal treatment of mixed waste will start after one more year of testing. The physical plant at ATG in Richland is expanding rapidly to perform these new tasks. In addition, a new rail spur will be run to the facility and a new storage area will be added. Kevin talked about the decision to recycle waste versus disposing of it including the difficulties and tradeoffs in costs involved. ATG has had more than two years of experience in processing low-level radioactive waste. ATG has a $17 million contract with Hanford that is underutilized now. Kevin talked about the decontamination

and free release of the two garbage trucks and compactors that were involved in the Richland landfill problem. Kevin showed some photos of work done for the Trojan nuclear power plant on their condenser tubes that were crushed and disposed of. The mixed waste facility is to begin testing in February 1999 and has five lines to stabilize a wide range of mixed waste. The gas vitirification unit is on one line, macroencapsulation on one line, and a number of mixing and liquid treatment operations are also used. There will be no liquid effluents from this facility. In response to a question, Kevin estimated that metal decontamination costs ≈ $1.90 per pound while cutting/size reduction and disposal cost ≈ $1.31 per pound.

Procurement Presentation

Dennis Houston of BHI procurement will present information on the C-Reactor procurement process to the STCG Management Council at their October meeting. Jim Goodenough will introduce Dennis and the intent is to convey information about how procurements can be used to demonstrate and deploy technologies successfully at Hanford. It was suggested that FDH and their subcontractor procurement personnel may want to hear this presentation also so we need to get the word out to them.

Subgroup Annual Report and Work Plan

Please send comments to Wayne Green on the FY99 Work Plan for the D&D Subgroup. Comments on the FY98 Annual Report are to be sent to Steve Weakley. Comments for both are due by the end of October. One idea being examined by the STCG is to make the S&T needs identification process a more continuous effort over the course of the year.

SPECTRUM Recap

A number of subgroup members attended the SPECTRUM conference in Denver last month. Jim Goodenough stated that the utilities presented data on the D&D being done on their nuclear reactors. Shannon Saget said that Rocky Flats is interested in a D&D exchange with Hanford. They are interested in what we did at C-Reactor and what we are doing now. They are willing to come up here to meet with us. Shannon asked if anyone from B&W was interested in meeting with them. Please let Shannon know. Shannon also said a TIE workshop will be held in Chicago on October 27-29 and will focus on D&D technologies. Jim Goodenough would like to see a presentation at the subgroup meeting of the FASTR job/cost-estimating tool being used by BWHC. Robbin Duncan will arrange this presentation. Gary Ballew was part of a panel discussion at SPECTRUM on how commercial technologies get deployed onsite.

DDFA Update

Mary Vargas, who used to work at Hanford, is now working for Paul Hart of DDFA. We may be able to use this contact to help us with DDFA issues. A call for Large Scale Demonstration proposals is scheduled to be out in January/February 1999. Potential

Large Scale Demos for Hanford include hot cells, Pu facilities, and fuel storage basins. One idea raised was to take the ASTD proposal for the Robotics Platform and put it in as a large scale demo. Robbin Duncan is on the technology selection committee for the Rocky Flats (RF) glove box large scale demo that is underway. He reported that the LANL developed Decontamination and Volume Reduction System (DVRS) is having trouble being used. The intent was to use the system at RF and then at other sites in the complex. Robbin sees a need to do a Large Scale Demo at Hanford for glove boxes. There is a need to widen the scope to include all potential technologies. Shannon Saget said there was probably no way that a Large Scale Demo would be accepted for glove boxes anytime soon. It might be better to put in an ASTD proposal for a specific technology instead. Robbin stated that Gerald Boyd is willing to take a technology proposal for the 324 Building B-Cell use of robotics to the DDFA. We should also look at an ASTD proposal for our 231-Z needs. Robbin would like to bring the robotics team to the STCG Management Council for a presentation on their work.

C-Reactor Closing Ceremonies

The ceremonies are tomorrow with the new DOE Secretary in attendance. There will be a lunch at the Doubletree Hotel with an awards ceremony also. There will also be an Integrated Contractor team meeting. Shannon stated that some of the C-Reactor technologies will be used at Rocky Flats and by Morrison-Knutsen on a Spanish reactor decon project. BNFL/ORNL have bought the STREAM system to use also.

S&T Needs Update

Kim Koegler has distributed to the subgroup the engineering technology needs statements for the Canyon Disposition Initiative (CDI). Kim is proposing to do the needs statements on a continuous basis. Kim would like to receive comments on these new needs statements by October 23. Kim wants to link the CDI needs on the STCG home page to the CDI home page. These are all new needs except for the robotics one, which replaces the earlier need.

CDI Update

Kim showed a video, five minutes, of the ANDROS robot at work in the U-Plant tunnel. Kim also showed viewgraphs of the COGEMA 3-D gamma camera images taken in U-Plant hot cells. The gamma imaging shows where the radioactive hot spots are. The COGEMA system will not work to the level of detail needed. Kim is looking at a B&W system to do the gamma imaging to the level required. He may need to rescope the effort.

WSU D&D Certificate Program

This new series of classes at WSU-TC started last Friday. Jim Goodenough and Sue Garrett are in the class, which meets every Friday until March. There are 24 students in the class of which 10 are DOE employees.

D&D Subgroup Meeting Attendees

Gary Ballew	PREC	946-0611
Greg Berlin	FDH	372-4352
Robbin Duncan	BWHC	373-2229
Don Engelman	NHC/FDH-TM	372-6536
Sue Garrett	PNNL	372-4266
Jim Goodenough	DOE-RL/AME	376-0893
Wayne Gross	FDH	372-6533
Bob Julian	Ecology	736-5702
Kim Koegler	BHI	372-9294
Shannon Saget	DOE-RL	372-4029
Steve Weakley	PNNL	372-4275
Detlev Wegener	FDH	373-2021